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Environmentally-efficient approaches to oil and gas producing sites

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Relevance: Oil and gas industry complex is one of the objects of high ecological hazard. It uses ignitable, highly flammable, dangerously explosive and toxic substances.

Goal: The perfection of the pumping-circulatory system of the drilling rig in order to improve the environmental safety data, the reliability and convenience while oil wells construction.

Methods: System approach of modernizing separate elements of pumping-circulatory system has been used.

Research results: A perfected design of pumping-circulatory system has been offered, which is peculiar by being composed of elastic materials, which enables air-tightness and isolates harmful substances from penetrating the environment.

Conclusions: The directions of equipment improvement have been outlined and the modernized scheme of pumping-circulatory system has been offered. The given design of the system makes it possible to make its elements maximum air-tight from penetrating hazardous substances of the mud to the environment, minimize expenses for transportation, assembling, operating, servicing, dismantling and creates safe work conditions for the personnel.

“EcoMining: Development of Integrated PhD Program
for Sustainable Mining & Environmental Activities”

